**Department of Energy**
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

07-SED-0042

NOV 17 2006

Mr. John J. Martell
Washington State Department of Health
Office of Radiation Protection
Air Emissions and Defense Waste Section
Post Office Box 47827
Olympia, Washington 98504-7827

Dear Mr. Martell:

TRANSMITTAL OF THE 209-E FACILITY RELEASE FRACTION DEVELOPMENT PLAN

References: (1) WDOH ltr to P. J. Garcia, RL, from E. W. Fordham, no subject, AIR 06-1069, dtd. October 18, 2006.

(2) WDOH ltr to P. J. Garcia, RL, from A. W. Conklin, no subject, AIR 06-805, dtd. August 29, 2006.

The U.S. Department of Energy, Richland Operations Office (RL) provides the enclosed Plan and Schedule for your acceptance, in response to the State of Washington, Department of Health (WDOH) letters of October 18, 2006 and August 29, 2006 (References 1 and 2). The enclosed "Plan and Schedule for Resolving the 209-E Potential-to Emit," outlines actions necessary to identify a release fraction for estimating the potential-to-emit (PTE) concentrations of airborne radionuclides from deactivated equipment in the 209-E Facility. The PTE is used to establish if the stack is of major or minor regulatory status, and to determine the applicable emissions monitoring, reporting, and permit requirements.

RL requests that WDOH provide formal written concurrence with the proposed plan. In addition, RL requests concurrence that continuous sampling, utilizing the existing sampling equipment and the existing level of quality assurance and reporting, will represent compliant monitoring for the stack emissions during the time the plan is being implemented.

If you have any questions, you may contact me, or your staff may contact Doug S. Shoop, Assistant Manager for Safety and Engineering, on (509) 376-0108.

Sincerely,

Keith A. Klein
Manager

SED:MFJ

Enclosure

cc w/encl: See Page 2

cc w/encl:
J. A. Bates, FHI
H. E. Bilson, FHI
R. H. Engelmann, FHI
E. W. Fordham, WDOH, MSIN B1-42
R. E. Gregory, FHI
N. A. Homan, FHI
J. E. Hyatt, FHI
M. B. Lackey, FHI
G. J. LeBaron, FHI
J. W. Schmidt, WDOH, MSIN B1-42
D. Zhen, EPA 10, Seattle
Environmental Portal, A3-95, LMSI
Administrative Record (files: 209-E Facility/ Stack 296-P-31; EU ID 210/Criticality Laboratory)

ENCLOSURE

*Plan and Schedule for*
*Resolving the 209-E Potential-to Emit (PTE)*

# Plan and Schedule for Resolving the 209-E Facility Potential-to-Emit (PTE)

As any or all of the following options are being completed, the 209-E Facility existing sample system, operated continuously, will represent compliant monitoring. In response to the Hanford Federal Facility FF-01 issued License, the annual National Emission Standards for Hazardous Air Pollutants (NESHAP) probe inspection for calendar year 2006 was conducted on October 11, 2006, and the sample line and probe continue to remain clean with no visible deposits. The following steps will be implemented to determine a PTE at 209-E and establish necessary monitoring. Commitment dates with deliverables to State of Washington, Department of Health (WDOH) are **bold** and underlined; other dates are working dates. The flow chart, decision points, and commitment dates identified below are shown in the enclosure.

**RESEARCH DOCUMENTATION for RELEASE FRACTION**

Step A. Determine if there is a release fraction published that is applicable to the configuration, and can be proposed to WDOH to resolve the PTE issue. This would include:

1. Discussions with/work performed by Mr. Jofu Mishima; a recognized expert with release fractions;
2. Identify if measurements have been taken at the Plutonium Finishing Plant (PFP) or at other Hanford facilities, which would help establish a release fraction;
3. Talk with people at other Hanford facilities and DOE sites to determine if there are pertinent data that would help establish a release fraction and
4. Offer status via a meeting to WDOH (**week of December 18, 2006**).
   If release fraction data are identified from documentation and/or discussion, execute Step B; if release fraction data are not identified from documentation, perform Step C.

**UTILIZE RELEASE FRACTION DOCUMENTATION**

Step B. If pertinent release fraction data are identified from existing documentation and/or discussion, develop a PTE for 209-E that follow the *Washington Administrative Code* (WAC) 246-247-030(21)(a) method for "other release fractions" used with WDOH approval:

1. Provide the PTE estimate to WDOH, by letter, with a request for approval; (**February 28, 2007**)
2. Obtain WDOH approval; (estimate March 30, 2007)
3. Request downgrade of the 209-E stack by letter; (April 30, 2007)
4. Obtain WDOH approval of downgrade and receive revised Hanford Federal Facility FF-01 License reflecting the downgrade (estimate May 31, 2007) and
5. Assuming revised FF-01 License is not received prior to end of December 2006, wait a minimum of 110 days necessary for processing of downgrade as a Hanford Air Operating Permit (AOP) significant modification, and then operate monitoring as a minor stack system. (estimate September 31, 2007).

**IDENTIFY METHODS for MEASURING RELEASE FRACTION**

Step C. If release fraction data are not identified in existing documentation or are not approved:

1. Submit a Test Plan to WDOH for approval, which identifies measurement methods at PFP, 209-E, or another representative location, which would provide data relevant to

establishing a release fraction for 209-E. (**February 28, 2007 or 6 weeks** after WDOH rejection of the release fraction and PTE).

2. Obtain WDOH approval of the Test Plan, identifying measurement methods and relevancy. (est. 1 month approval period following request for approval).
   Once the methods have been determined and approved by WDOH, the implementation methods and completion dates will be developed.

**CONDUCT RELEASE FRACTION MEASUREMENTS**

Step D. With methods and relevancy approved by WDOH, obtain release fraction measurements and develop a PTE for 209-E that would follow the WAC 246-247-030(21)(a) method for "other release fractions" in accordance with the Test Plan:

1. Provide the developed PTE estimate to WDOH for approval;
2. Obtain WDOH approval; (est. 1 month after providing the developed PTE to WDOH).
3. Request downgrade of the 209-E stack;
4. Obtain WDOH approval of downgrade and receive revised FF-01 license reflecting the downgrade and
5. Assuming revised FF-01 license is not received prior to end of December 2006, wait minimum of 110 days necessary for processing of downgrade as an AOP significant modification, and then operate monitoring as a minor stack system.

**IDENTIFY the STACK as a MAJOR STACK**

Step E. If collected release fraction data do not result in a minor stack PTE ($\leq$0.1 mrem/yr TEDE to the MEI), request approval of alternate monitoring per WAC 246-247-075(4): (**4 months** after it is determined that 209-E warrants management as a major stack)

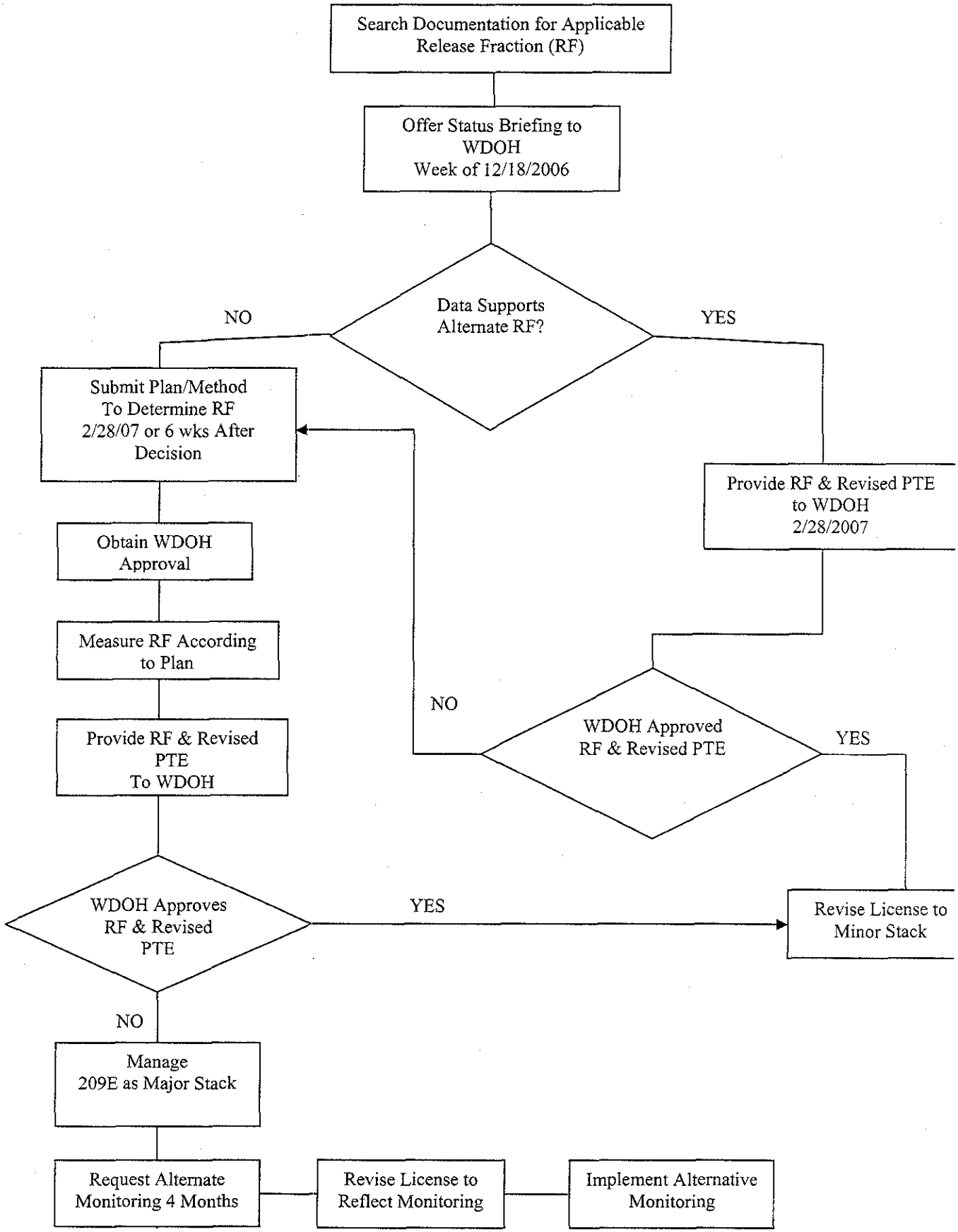
1. Obtain revised FF-01 License reflecting alternate monitoring. (estimate 6 weeks after submitting the alternate plan)
2. Initiate preparations for alternative monitoring (estimate 2 weeks after receiving the revised license).

**DENOUEMENT**

While several steps are identified to determine a release fraction, any of the steps can be skipped and Step "E" may be elected, to request alternate monitoring for 209-E.

The U.S. Department of Energy, Richland Operations Office (RL) requests WDOH written acceptance of this Plan and Schedule. RL also requests formal written concurrence regarding the 296-P-31 stack emissions sampling during the time the Plan and Schedule are being implemented. In the concurrence, please specify that continuous sampling, utilizing the existing sampling equipment, and the existing level of quality assurance and reporting, will represent compliant monitoring, until such time as the plan and schedule items have been completed.

The commitment dates identified in the Plan and Schedule may be altered with WDOH concurrence.


Search Documentation for Applicable Release Fraction (RF)
Offer Status Briefing to WDOH Week of 12/18/2006
Data Supports Alternate RF?
NO
YES
Submit Plan/Method To Determine RF 2/28/07 or 6 wks After Decision
Obtain WDOH Approval
Measure RF According to Plan
Provide RF & Revised PTE To WDOH
Provide RF & Revised PTE to WDOH 2/28/2007
WDOH Approved RF & Revised PTE
NO
YES
WDOH Approves RF & Revised PTE
YES
Revise License to Minor Stack
NO
Manage 209E as Major Stack
Request Alternate Monitoring 4 Months
Revise License to Reflect Monitoring
Implement Alternative Monitoring